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REMARKS

At the outset, applicants wish to thank the Examiner for the very thorough and professional office action, and for stating with particularity the basis for the final rejection. Second, appreciation is hereby expressed to Examiner Ebrahim for the interview so courteously granted on January 10, 2008.

During the interview a working example and comparison example were discussed. It was emphasized during the interview that none of the prior art of record recognized the problems of providing a thickening agent for an external composition which imparts to the composition excellent sensation during use, that is, a composition which is free of a sticky sensation or frictional sensation, and which also exhibits long-term stability.

Dr. Ebrahim indicated during the interview that for her to formally consider the working example and comparison example, it would be necessary that these tests be incorporated in a declaration executed by the person under whom the tests were conducted. Although Dr. Ebrahim indicated that these tests may raise new issues which would require an additional search, the undersigned urged that it was believed that these additional tests would not raise new issues because similar comparative tests have already been incorporated into the Specification. It was strongly urged during the interview that the comparative tests discussed demonstrated unequivocally the unexpected results obtained when the thickening agent is prepared by the process now called for in the claims herein.

It is therefore strenuously urged that the present amendment and accompanying declaration do not raise any new issues requiring any additional search. It is also urged that the attached declaration unquestionably demonstrates the unexpected results in properties obtained

when a thickening agent is prepared by the process claimed herein. Claims 1, 2, 5-13, 16 and 17 remain in the application.

Reconsideration is respectfully requested of the rejection of claims 1-2, 5-13, and 16-17 under 35 U.S.C. 103(a) as being unpatentable over Okura, et al. US 5360624 in view of Hayashi Tadanobu JP4279509 (abstract) (hereinafter Hayashi) and further in view of Murata, et al., US Publication 20020006414 (hereinafter Murata).

Applicants respectfully traverse this rejection on the grounds that it is unfounded either in fact or in law for the reasons discussed hereinafter.

### **The Issues**

This rejection raises a number of important issues, each of which is set forth below as follows:

1. Whether the subject matter called for in Claims 1, 2, 5-13, 16 and 17 is unpatentably obvious under 35 U.S.C. 103(a) over Okura, et al. in view of Hayashi and further in view of Murata, et al.
2. Whether secondary considerations hereby presented in the enclosed declaration of Mr. Miyazawa and Attachments A and B rebut any *prima facie* case of obviousness of the Examiner's in the final rejection.

It is respectfully urged that the answer to the above issues is in the negative with respect to the first issue, and in the affirmative with respect to the second issue.

### **The Law**

With respect to the first issue it is necessary that the Examiner resolve the factual inquiries in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), see Notice of Examination

Guidelines appearing in the Federal Register, volume 72, No. 195, dated December 10, 2007.

To reject a claim based on the rationale that some teaching, suggestion, or motivation in the prior art would have led one of ordinary skill in the art to modify the prior art references or to combine the prior art teachings to arrive at the claimed invention, it is necessary that the Examiner make the following findings:

- (1) A finding that there was some teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings;
- (2) A finding that there was reasonable expectation of success; and
- (3) Whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art. See *DyStar Textifarben GmbH & Co., Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 80 USPQ 2d 1641, 1645 (Fed.Cir. 2006).

Office personnel should consider all rebuttal evidence that is timely presented by the applicants when reevaluating any obviousness determination. Rebuttal evidence may include evidence of "secondary considerations" such as commercial success, long felt but unsolved needs [and] failure of others, and may also include evidence of unexpected results. Federal Register Notice, volume 72, October 10, 2007, at 57534.

Although the Supreme Court recently rejected the requirement that there must be some

teaching, suggestion or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art references to arrive at the claimed invention, the Court nonetheless indicated that the lack of any teaching, suggestion or motivation in the prior art may still be considered as one factor in the overall determination of obviousness. *KSR International Co. v. Teleflex, Inc.*, 550 U.S. \_\_\_\_ , 82 USPQ 2d 1385 (2007)

With respect to the second issue above, objective evidence of secondary considerations, such as unexpected results, are relevant to the issue of obviousness and must be considered in every case in which they are present. See MPEP 2141 II. It is the duty of the Examiner to evaluate such evidence. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed.Cir., 1983); and *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 USPQ 81 (Fed.Cir., 1986), cert. denied, 480 U.S. 947 (1987).

Proof of an unexpected improvement can rebut a prima facie case of obviousness. *In re Murch*, 464 F.2d 1051, 175 USPQ 89 (CCPA, 1972). No matter how strong the prima facie case of obviousness made out by the PTO, it must be weighed against any factors to the contrary brought out by the applicant in determining the validity of the conclusion of patentability unobviousness. *In re Lewis*, 443 F.2d 489, 170 USPQ 84 (CCPA, 1971). Therefore, facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion was reached, not against the conclusion itself. *In re Lilly & Co.*, 902 F. 2d 943, 14 USPQ 2d, 1741 (CAFC, 1990).

### **Discussion**

As pointed out in the Specification on page 12, lines 14-21, "Conventionally, a compound capable of forming a gel, such as agar, carrageenan, curdland, or gelatin, has been

used as a viscosity control agent. In this case, such a compound is heated and dissolved in an external composition, and the resultant mixture is gradually cooled under stirring, to thereby obtain a viscous composition without solidification (gellation) of the compound (e.g. Japanese Patent Application Laid-Open Kokai No. 11-209262)." (emphasis ours)

In contrast, the present inventive process is described as follows:

"Firstly, any of the aforementioned hydrophilic compounds capable of forming a gel is dissolved in an aqueous solvent such as water, and is allowed to form a gel. The hydrophilic compound may be dissolved in an aqueous solvent through a customary method; for example, through mixing or heating. Gellation (solidification) is preferably carried out by stopping heating of the resultant mixture after dissolving, and then allowing the mixture to stand still until the temperature of the mixture becomes lower than the gellation temperature (solidification temperature). (Specification, page 5, lines 5-14) (emphasis ours)

It is respectfully submitted that one of ordinary skill in the art would understand from the above disclosure in the Specification that in the present invention involving solidification is carried out by stopping heating of the mixture after dissolving, and then allowing the mixture to stand still, i.e., without stirring or agitation, until the temperature of the mixture is lower than the gellation temperature.

It is respectfully submitted that there is no disclosure whatever in any of the prior art of record of stopping the heating of an aqueous mixture of the hydrophilic compounds capable of forming a gel as set forth in the claims herein and then after stopping heating, allowing the mixture to stand still (without any stirring or agitation) until the mixture is cooled below the solidification temperature. On the contrary, that teaching or suggestion comes only from the

present application, and constitutes an important element or aspect of the present invention.

It is also respectfully urged that there is no teaching, suggestion, or motivation in any of the references taken individually, or in combination, of cooling such a mixture as described above without any stirring or agitation until solidification. Although it is recognized that the Supreme Court in KSR has held that it is not a requirement in a combination rejection under 35 U.S.C. 103 that there be some teaching, suggestion or motivation to combine the references, the Court nonetheless indicated that this still may be a factor in the determination of non-obviousness.

In this connection, it is respectfully urged that the Examiner in the final rejection has made no finding as required by the Graham analysis that there was knowledge generally available to one of ordinary skill in the art to modify the references or to combine the reference teachings in the manner suggested by the Examiner in the final rejection, and that there also was a reasonable expectation of success if the references were combined in such a manner.

Since the final rejection lacks these required findings, it is respectfully urged that the rejection fails as a matter of law in view of the above authorities.

In any event, applicants are hereby submitting evidence of non-obviousness in the form of a declaration executed on January 18, 2008 by Mr. Kazuyuki Miyazawa. This declaration presents comparison data which shows that a microgel which is prepared by standing and cooling an agar solution to form a gel and then pulverizing the gel with a homogenizer is very different in viscosity from a microgel which is prepared by stirring and cooling an agar solution with a homogenizer.

Specifically, the former microgel has a viscosity of 250,000 mPa's. In contrast, the latter microgel has a viscosity of 450 mPa's. None of the references of record described that the viscosity of microgel is very different due to the process of producing the microgel, that is, in a case where an aqueous solution of a hydrophilic compound capable of forming a gel is solidified and the resultant gel is pulverized to obtain a microgel, the microgel has a very high viscosity. But, on the other hand, in a case where an aqueous solution of a hydrophilic compound capable of forming a gel is stirred and cooled to obtain a microgel, the resultant microgel has a low viscosity:

It is respectfully pointed out in the attached declaration of Mr. Miyazawa, the data obtained from the additional working example and the additional comparison example make it clear that differences in the gelling process of agar results in differences of viscosity of the microgel. This data establishes that in cases where stirring is carried out of an agar solution, the product was in a state of that close to water as shown in the attached photograph. Also, the particle size was larger.

Further, this data establishes that solidification of agar solution is a very important process for agar molecules intertwining each other, and, if unnecessary force is added, such as stirring, during solidification of the agar solution, a uniform network is not formed, and thereby friction of microgel particles is difficult to be generated. As a result, the microgel does not have high viscosity.

The declaration of Mr. Miyazawa also makes clear that when the agar solution is solidified by standing (without stirring or any agitation) and the resultant agar gel is pulverized

into a microgel, the microgel has a high viscosity because a uniform network is formed and friction of the microgel particles is produced.

The Examiner's attention is directed to the attachment to the Miyazawa declaration demonstrating step wise the prior art process of stirring and cooling which produces a low viscosity gel (see photograph). In contrast, this attachment to the Miyazawa declaration also shows the step wise process steps of standing and cooling without stirring, resulting in a gel having smaller particle sizes and a high viscosity as shown in the photograph.

In view of the above evidence, it is respectfully submitted that any *prima facie* case of obviousness which may have been established by the Examiner's combination of references is rebutted by the secondary evidence of unexpected results hereby presented in the Miyazawa declaration.

Further, additional evidence of secondary consideration in form of commercial success is hereby presented in the form of an Attachment A referencing Shiseido Future Solution Total Revitalizing Cream which contains a thickening agent produced by the process of the present invention. In Attachment A, it can be seen that a number of Shiseido products containing a thickening agent produced according to the process of the present invention have been accorded awards both in the USA and a number of other countries throughout the world. Attachment B shows a list of ingredients in the Shiseido product "Future Solution" which includes a microgel produced according to the process of the present invention.

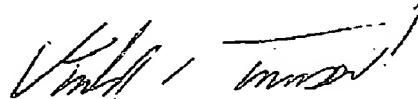
It is strenuously urged that the evidence of unexpected results and commercial success hereby presented rebuts any *prima facie* case of obviousness in the final rejection. Consequently, the Examiner would be justified in no longer maintaining this rejection.

Withdrawal of the rejection is accordingly respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is now in condition for allowance, and early action and allowance thereof is accordingly respectfully requested. If there is any reason why the application cannot be allowed at the present time, it is respectfully requested that the Examiner contact the undersigned at the number listed below to resolve any problems.

Respectfully submitted,

TOWNSEND & BANTA



Donald E. Townsend  
Registration No. 22,069

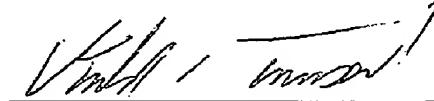
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Date: January 31, 2008

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CERTIFICATE OF TRANSMISSION

I hereby certify that this facsimile transmission, consisting of a 10-page Response After Final Rejection, a 4-page Declaration of Mr. Kazuyuki Miyazawa with one enclosure, a 1-page Attachment A, and a 1-page Attachment B in U.S. patent application serial No. 09/936,317, filed November 6, 2001, is being facsimile transmitted to the U.S. Patent and Trademark Office (Fax no. 571-273-8300) on January 31, 2008.



Donald E. Townsend